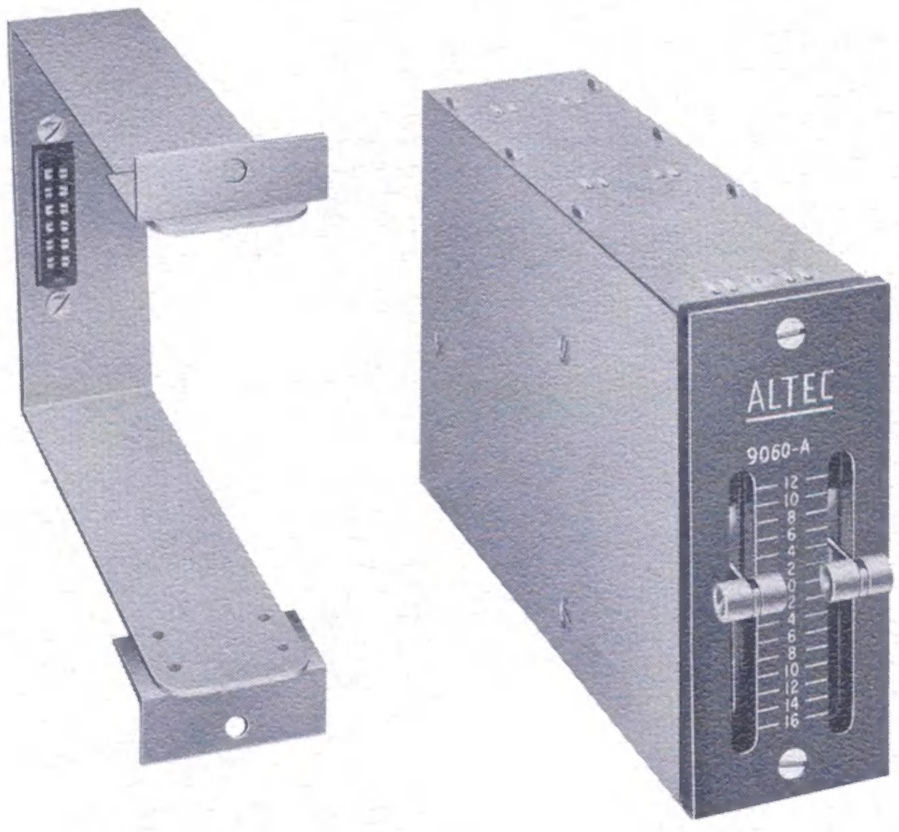
9060A Microphone Equalizers

9060A



Features:

- Up to 12 db High- and Low-Frequency Equalization
- Down to −16 db High- and Low-Frequency Attenuation
- Precision-Calibrated in 2 db steps
- Wide Range over Entire Audio Spectrum
- Vertical Slider Controls for Greater Accuracy — Easiest Reading
- Compensation for Wide Variations in Microphone/Ambient Characteristics
- Passive Circuit Elements — No Power Required
- Plug-In Connections to Mounting Frame
- May be Inserted Directly in Audio Line
- Miniature Size — Readily Installed
- Quietness of Operation
- Long-Term Stability

PROFESSIONAL RECORDING, BROADCAST AND REMOTE CONTROLS — PUBLIC ADDRESS AND SOUND REINFORCEMENT SYSTEMS — MOTION PICTURES

Multi-channel recording allows the audio engineer to select the particular microphone which provides an optimum response and pickup pattern for each of a variety of soloists, ensembles or acoustic environments. This procedure of using different types of microphones for recording a single master, however, may produce an uneven overall response in the finished product. The Altec 9060A Microphone Equalizer is designed to correct the variations in response which occur under these circumstances, and to compensate for variations in apparent frequency response caused by changes in the microphone-to-subject distance, and for acoustical characteristics of the recording area (indoor or outdoor, 'dead' room or 'live' room, etc.)

In remote and 'on location' broadcast and sound recording applications, the continuously variable low and high frequency controls of the 9060A make possible immediate attenuation of many ambient disturbances with minimal effect on the program material. In high-quality sound reinforcement usage, the 9060A is exceptionally valuable in reducing low-frequency signal pickup, thereby minimizing acoustic feedback from this source.

The compact 'plug-in' design and precision sliding lever controls facilitates installation of the 9060A in virtually any type of fixed or mobile mixer console. The passive L/C/R bridged 'T' network circuit requires no power supply and introduces no distortion. The 9060A may be inserted directly into a 600 ohm transmission line at any point where the maximum/minimum input levels are satisfied.

The positive operation, small size, extreme quietness of operation and wide range make the Altec 9060A Microphone Equalizer the ideal choice for the finest microphone compensation in all professional sound applications.

ALTEC LANSING®

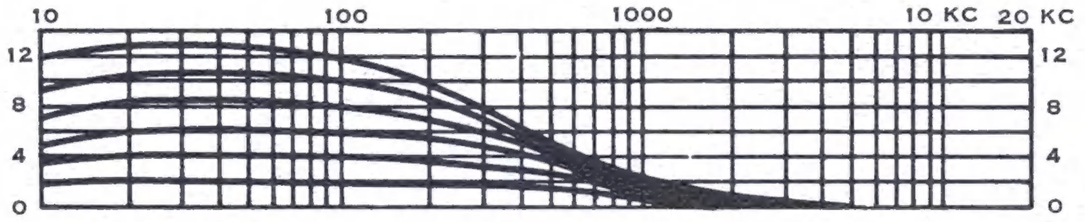
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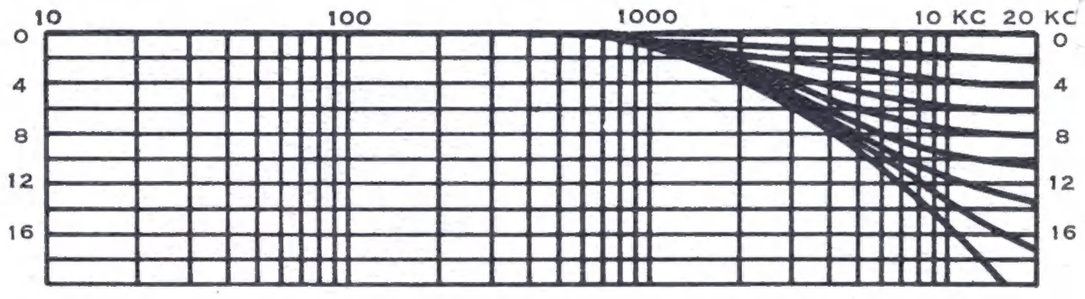
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New York

RECORDING &
BROADCASTING
EQUIPMENT

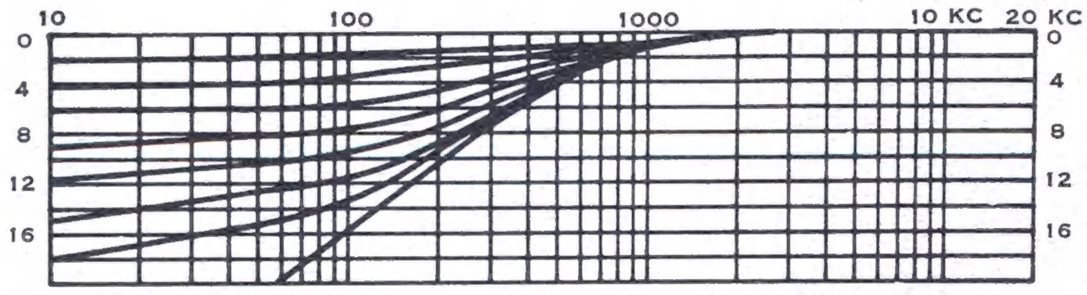
ALTEC 9060A



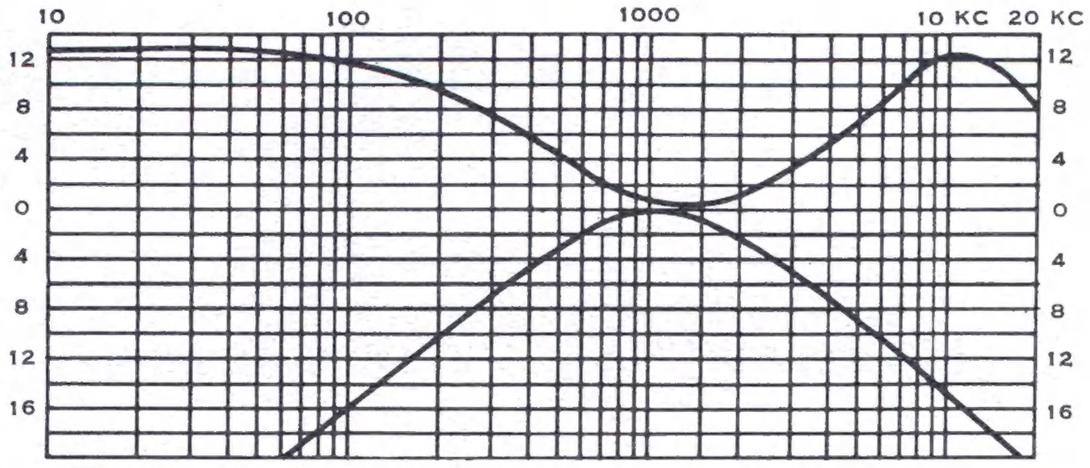
100 CPS LOW FREQUENCY EQUALIZATION



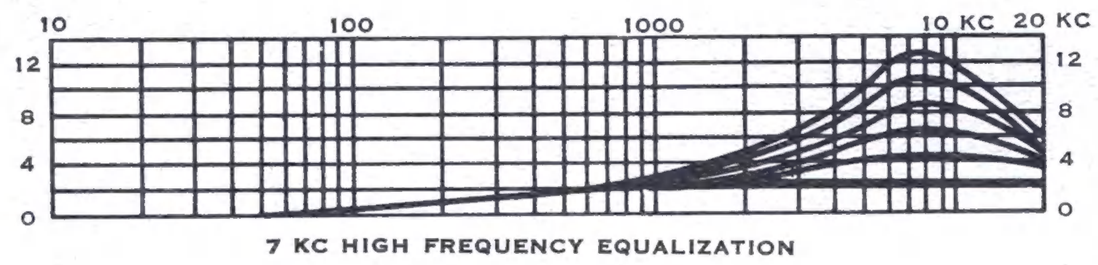
10 KC HIGH FREQUENCY ATTENUATION



100 CPS LOW FREQUENCY ATTENUATION



100 CPS AND 10 KC MAXIMUM EQUALIZATION AND ATTENUATION



7 KC HIGH FREQUENCY EQUALIZATION

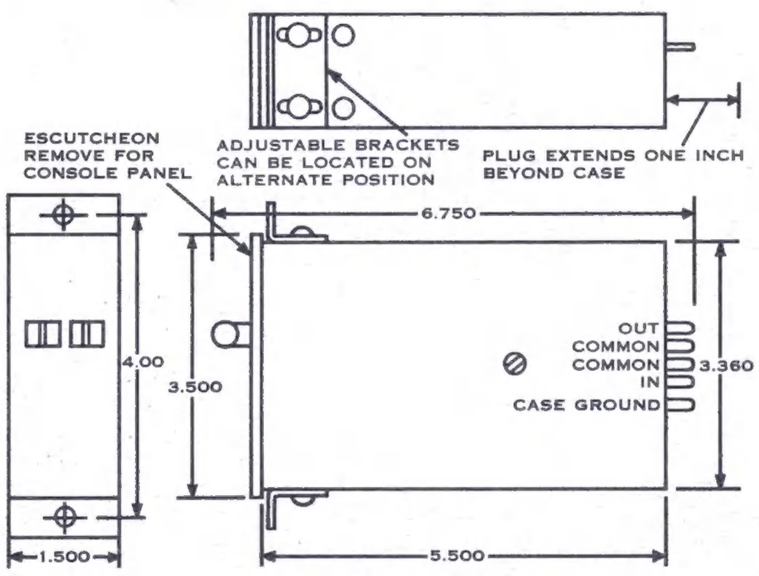
SPECIFICATIONS

Circuit:	Passive L/C/R Bridged 'T', Constant 'K'
Impedance:	Input — 600 ohms Output — 600 ohms
Insertion Loss:	14 db (with controls at '0')
Calibration:	2 db steps
Equalization:	HF: Maximum +12 db at 7 kc; Minimum −16 db at 10 kc LF: Maximum +12 db at 100 cps; Minimum −16 db at 100 cps
Input Level:	Minimum: −70 dbm to Maximum +20 dbm
Controls:	2 vertical slider type, silent operation
Connections:	Plug-in mounting
Power Requirements:	None
Distortion:	None
Dimensions:	3½" H x 1½" W x 5½" D
Weight:	1 lb. 12 oz.
Finish:	Black anodized escutcheon with bright nickel hardware

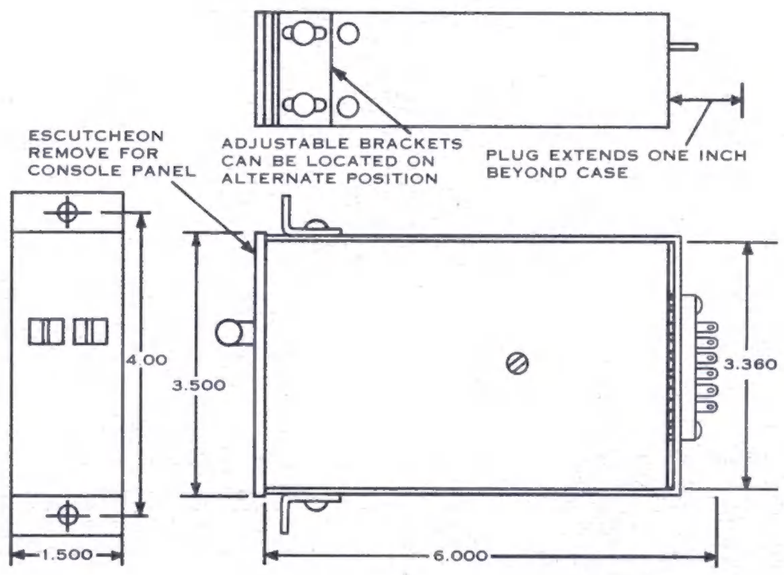
NOTICE

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DIMENSIONAL INFORMATION



WITH MOUNTING BRACKET



WITH PLUG-IN MOUNTING BRACKET

PRINTED IN U.S.A. 8/65

© ALTEC LANSING

352A Mixer/Power Amplifier

352A



SOLID ALTEC STATE SOUND

Features:

All Transistor Mixer/Power Amplifier

Five Mixing Inputs with Controls

40 Watts of Power

Full Range of Plug-in Accessories:

Microphone Preamplifier

Equalized Phono Preamplifier

Line Transformer

DC Power Adapter

Volume Compressor Assembly

Vu Meter Assembly

Equalization — Compression — Amplification All in One Unit

Battery Operation Optional for Complete Portability and Emergency Use

Monitor Output with Its Own Volume Control

Two Recorder Outputs:
One Independent of Master Gain and Tone Controls, the Other Subject to Their Settings

5 CHANNEL MIXER/POWER AMPLIFIER FOR:
CHURCHES — SCHOOLS — HOTELS — THEATERS — CONVENTION HALLS
BALL PARKS — STADIUMS — RECREATION AREAS — SOUND TRUCKS
RECORDING STUDIOS — BROADCAST STATIONS — AUDITORIUMS

The Altec 352A mixer/power amplifier is an all solid-state power amplifier equipped to control and mix up to 5 independent input signals. Producing 40 watts of power, the 352A mixer/power amplifier is specially designed to operate from either an ac or dc source, providing the utmost in full sound control with the flexibility of portable operation. The 352A features a full range of plug-in accessories, enabling a complete sound system to be assembled in minutes, from the magnetic phono, microphone, or high level line sources, to the 70-volt output — including compressor amplifier, vu meter assembly, dial markers and cover for shelf mounting.

Each of the 5 input channels has a socket for mounting an accessory plug-in unit — whether it is the 1478A transistor preamplifier, the 1579A equalized phono preamplifier, or the 15095 line transformer (to match high level balanced lines to the mixer) — to provide impedance matching, preamplification and equalization within the 352A mixer/power amplifier. Each channel is equipped with a volume control AND a speech-music switch to provide dialog equalization. The master gain control has a normal-bright switch associated with it to provide a rise in response in the 3 to 5 kc region to improve articulation. If a volume compressor and vu meter are required, they may be mounted within the 352A mixer/power amplifier and do not require soldering to install.

The circuitry of the 352A mixer/power amplifier is designed around a 12 to 14 vdc supply so that operation from a standard 12 volt automobile battery is possible. A socket is provided on the rear of the chassis of the 352A for insertion of the 14649A dc power adapter. When equipped with the dc power adapter the 352A may be operated from a vehicle battery with or without the motor running since the zero signal current drawn from the battery is only 0.24 amperes. On this basis a small 10 ampere-hour battery will last 40 hours in standby and approximately 10 hours with voice announcements.

The Altec 352A mixer/power amplifier is ideally suited for emergency use in applications where a loss of the sound system cannot be tolerated. The dc power adapter with battery used in conjunction with the ac line will provide continuous service in the event of an ac power failure. The 14649A dc power adapter is designed to automatically switch from the ac line to the battery without interrupting program material. In addition, the dc power adapter will provide a trickle charge to the battery, thereby maintaining the battery at full charge ready for instant use.

The Altec 352A mixer/power amplifier is constructed on a standard 19" rack chassis, occupying 7" of rack space. The front panel has raised abrasion resistant characters with bleached write-in blocks for channel identification. The front panel incorporates the standard Altec front panel hinge assembly for rapid access to the chassis interior. The 14784 cover accessory allows the 352A to be shelf mounted and has a sloping front to prevent inadvertent movement of the controls. Weighing only 23½ pounds, the 352A is easily moved for portable operation.

ALTEC® LANSING CORPORATION

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INPUT ACCESSORIES

The plug-in accessories for the input circuits of the mixer/power amplifier are carefully designed units, using solid-state circuitry for rugged dependable operation and high quality performance. These plug-in accessories make the proper input circuit instantly available for rapid installation permitting use of a wide range of input devices. Sockets on the rear of the mixer/power amplifier are pre-wired for the proper operating voltage and circuit connections, allowing the various plug-in accessories to be interchanged without rewiring, circuit or component changes and to be used in any combination to match *properly*, all commonly used input devices. The following descriptions are provided to explain the functions and performance of each of them.

1578A MICROPHONE PREAMPLIFIER

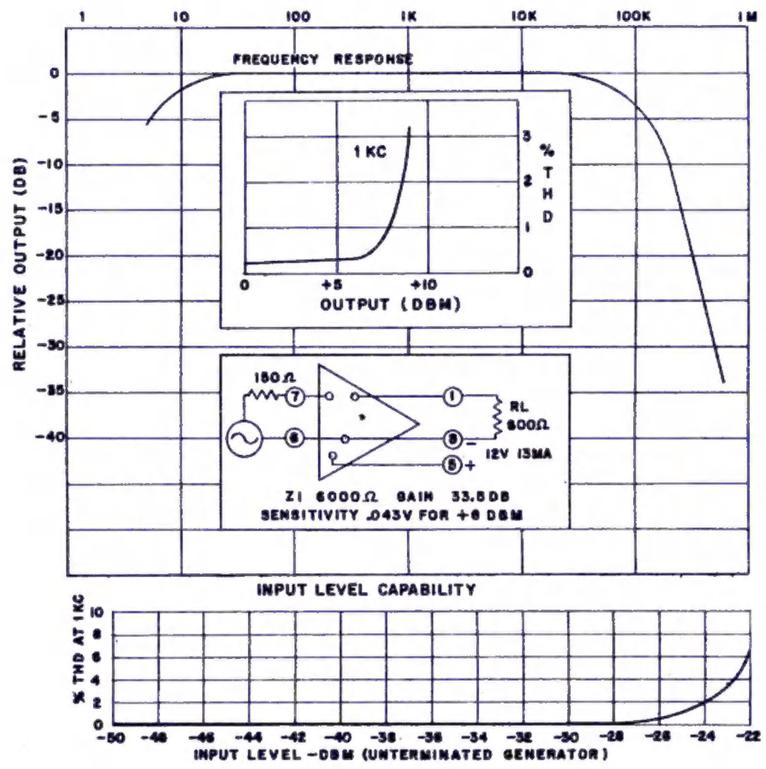
The 1578A microphone preamplifier is designed with a gain of 33.5 db. Sensitivity is 43 millivolts rms for an output of +8 dbm. Frequency response is ±0.5 db, 20-20,000 cps, or, ±1.5 db, 15-50,000 cps. Source impedance is 150 ohms nominal, usable 30 to 20,000 ohms. Equivalent input noise is −122 dbm. The 1578A requires 12 vdc at 13 ma. The 1578A microphone preamplifier may be used with any high quality low-impedance microphone.

1579A PHONO EQUALIZED PREAMPLIFIER

The 1579A phono equalized preamplifier is specially designed for magnetic phono pick-ups to meet the RIAA standard. Sensitivity is 5 millivolts for 70 millivolt output at 1 kc. Output is +8 dbm at less than 0.5% thd (total harmonic distortion). Input impedance is 47,000 ohms and the power required is 12 vdc at 11 ma. Figure 1 illustrates the performance of the 1579A as referenced to the RIAA standard.

15095 LINE TRANSFORMER

The 15095 line transformer may be used as a bridging transformer for bridging a balanced 600 ohm line. The 15095 has 30 db of electro-magnetic shielding and a frequency response of ±1 db, 30-20,000 cps. The 15095 line transformer may also be used to perform a terminating function rather than a bridging function by the addition of a proper terminating resistor at the input of the mixer/power amplifier.



1578A MICROPHONE PREAMPLIFIER

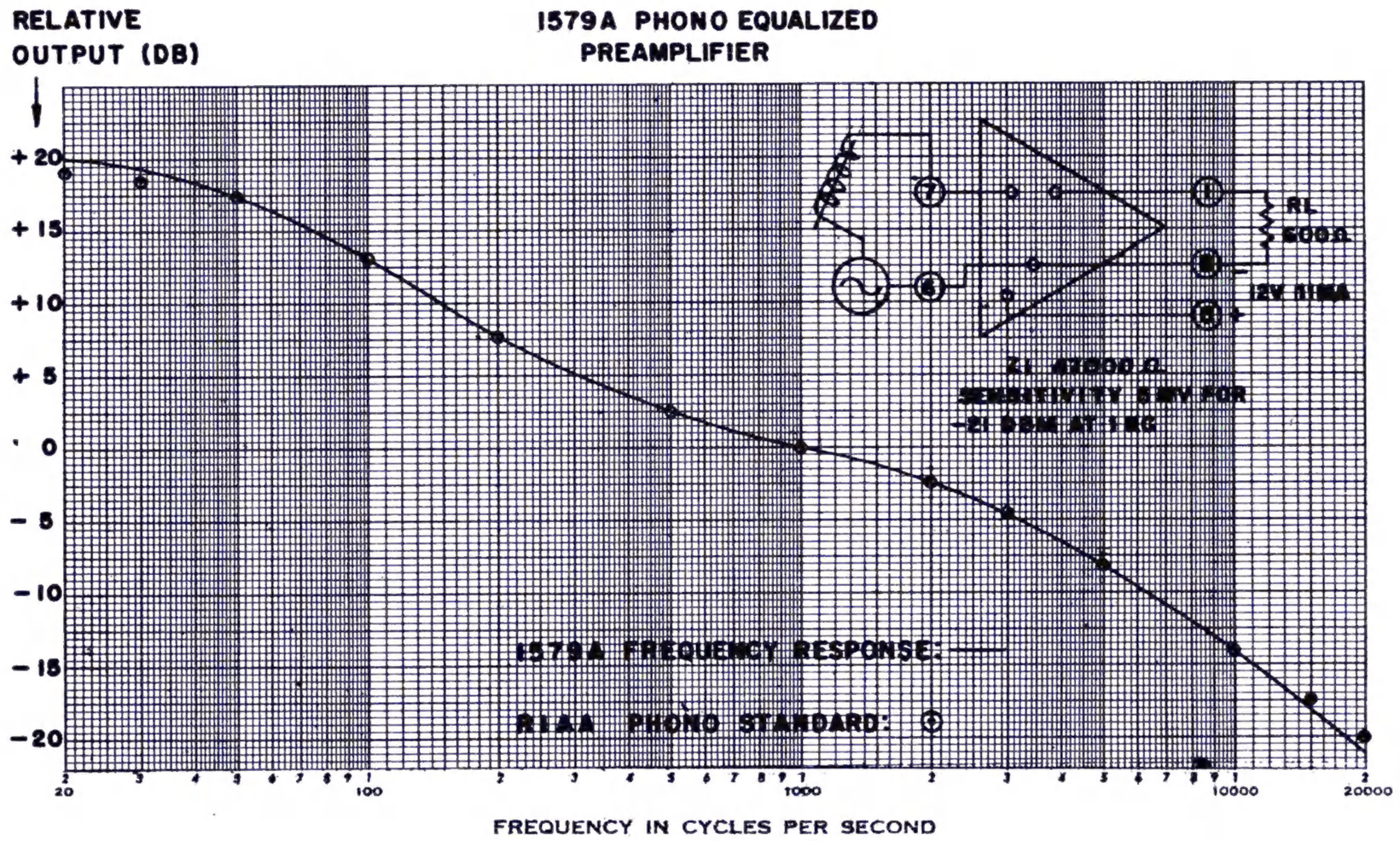


FIGURE 1

ALTEC 352A

SPECIFICATIONS

Type: 5 channel transistor mixer power amplifier with plug-in options.

Gain: 115 db with 157A plug-in microphone preamplifier. 65 db with 15095 plug-in transformer bridging 600 ohm line.

Input Sensitivity: (each input) 1 mv rms for 40 watts output with 1579A equalized amplifier for magnetic phono pickups.

Power Output: 40 watts at less than 1% thd 35 to 5,000 cps.
40 watts at less than 3% thd 30 to 12,000 cps.
45 watts at less than 5% thd 30 to 10,000 cps.
50 watts at less than 5% thd 35 to 5,000 cps.

Frequency Response: ±1 db 20c to 20,000 c.

Input Impedance: (each input) Direct input to mixer pots, 600 ohms nominal (unbalanced).

Source Impedance: 150 ohms nominal with 1578A preamplifier. Usable to 20,000 ohms.
Up to 50,000 ohms with 1579A equalized amplifier.
600 to 15,000 ohms with 15095 transformer.

Load Impedance: 4/8 and 16 ohms balanced to ground. 125 ohms ungrounded.

Load Voltage: 12.7/18 and 25.3 volts balanced to ground. 70 volts ungrounded.

Output Impedance: Less than 15% of nominal load impedance.

Noise Level: Equivalent input noise −122 dbm with 1578A preamplifier. Output noise −35 dbm with master control closed.

Monitor Output: 28 db below main output (max.) into 600 ohms.

Recorder Output: #1 0.1 volts into 10,000 ohms (−55 dbm input, 14 db mixer setting, independent of master).
#2 0.12 volts into 10,000 ohms (−55 dbm input, 14 db in mixer and master controls. Level subject to settings of all controls).

Controls: 5 mixer, 1 master, 1 bass, 1 treble, 1 monitor volume. Dialog equalizer switch for each input (−6 db @ 100 cps). Articulation equalizer switch for output (+3 db @ 5 KC). Power switch controlling AC or alternate DC power source.

Ambient Temperature Range: −5 degrees to +120 degrees F.

Power Supply: 120 volts 50-60 cps (15 watts at zero signal, 56 watts at ⅓ output, 90 watts at full output).
OR
12-14 dc using 14649A dc power adapter, (0.24 amps at zero signal, 2.9 amps at ⅓ output, 5.0 amps at full output).

External Power Available: Ac receptacle on chassis.
.15 amp nominal trickle charge current for battery using 14649 A dc power adapter when ac power is applied.

Dimensions: 7″ high, 19″ wide, and 7½″ deep.

Color: Dark green.

Weight: 23½ lbs.

Accessories:
1578A transistor preamplifier plug-in (microphone).
1579A equalized transistor amplifier for magnetic phono pickup. Plug-in.
14649A dc power adapter with automatic line-to-battery transfer. Plug-in.
14679A vu meter assembly. Plug-in connection.
14678A compressor assembly. Plug-in connection.
15095 transformer, plug-in. (High level balanced line to mixer.)
14784 cover.
14731 dial marker kit.
XLR 3-12 Cannon straight cord plug.

Ordering Information: Order 1, 325A amplifier plus 1, 1578A preamplifier for each microphone input, 1, 1579A equalized amplifier for each phono input and 1, 15095 transformer for each line input. Total of above cannot exceed 5.
Add 1, 14679A assembly if vu meter is required.
Add 1, 14678A assembly if volume compressor is required.
Add 1, 14649A adapter if operation from 12 volt battery is required.
Add 1, 14730A kit if dial markers are required.
Add 1, 14784 cover if shelf mounting is required.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The mixer/amplifier shall be of the all solid-state type, designed to control and mix up to 5 independent input signals. Each input shall be capable of accepting XL type connectors, with associated sockets for plug-in accessories, specified elsewhere, to provide proper input matching for magnetic phono, microphone, high-level line or equivalent. Each of the 5 channel inputs shall be equipped with separate volume and speech-music controls. The master gain control shall have a normal-bright switch associated with it to provide a rise in response in the 3 to 5 kc region for articulation. The mixer/amplifier shall have a treble and bass control, monitor volume control, power on-off, and in addition shall be capable of supplying the proper voltages and mounting facilities for a volume compressor and vu meter, including properly designated areas for control knobs.

The mixer/amplifier shall have a frequency response of ±1 db, 20-20,000 cps and shall produce 40 watts at less than 1% thd (total harmonic distortion) 35 to 5,000 cps. Gain shall be 115 db with plug-in microphone preamplifier, specified elsewhere, and input impedance shall be 600 ohms direct to mixer pots (unbalanced). The output impedance of the mixer/amplifier shall be 4/8 and 16 ohms balanced to ground and 125 ohms ungrounded.

The mixer/amplifier shall be capable of using a dc power adapter accessory, specified elsewhere, enabling the mixer/amplifier to operate either ac or dc from a 12-volt battery. Power requirements of the mixer/amplifier shall be such that the unit may operate at least 10 hours on voice announcements from a standard vehicular type battery, and if used in conjunction with the ac line, shall supply a trickle charge to the battery to maintain it in full charge condition. In addition, when used with both the ac line and a battery, the mixer/amplifier shall provide uninterrupted program material in the event of an ac line failure when switching from either the ac line to the battery, or from the battery to the ac line.

The mixer/amplifier shall be constructed on a standard 19″ rack chassis, occupying 7″ of rack space, 19″ wide and 7½″ deep, and shall weigh no more than 23½ pounds. The mixer/amplifier shall be painted dark green and shall have raised abrasion resistant characters on the front panel with bleached write-in blocks for channel identification. The front panel shall be hinged to permit access to the interior of the unit without removing the chassis from the rack or cover.

There shall be available, as a plug-in accessory to the mixer/amplifier, a transistor preamplifier with a nominal 150-ohm source impedance, usable 30-20,000 ohms. Frequency response shall be ±0.5 db, 20-20,000 cps, or, ±1.5 db, 15-50,000 cps. The transistor plug-in preamplifier shall have a gain of 33.5 db and sensitivity shall be 43 millivolts for an output of +8 dbm. The plug-in transistor preamplifier shall allow any high-quality low-impedance microphone to be used with the mixer/amplifier.

There shall be available, as a plug-in accessory to the mixer/amplifier, a phono equalized transistor amplifier which shall meet the RIAA standard. Sensitivity shall be 5 millivolts for 70 millivolt output at 1 kc. Output shall be +8 dbm at less than 0.5% thd (total harmonic distortion). Input impedance shall be 47,000 ohms and power required shall be 12 vdc at 11 ma.

Any mixer/amplifier and plug-in accessories not meeting the above specifications shall be deemed unacceptable under this specification.

The mixer/amplifier shall be Altec Lansing model 352A.

The transistor preamplifier shall be Altec Lansing model 1578A.

The phono preamplifier shall be Altec Lansing model 1579A.

NOTICE

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LITHO IN U.S.A. CP

CAT. NO. AL-1482

361A Mixer/Power Amplifier

361A



Features:

- Two Channel Mixer/Power Amplifier
- Full Range of Plug-In Accessories
- All Solid-State Design
- Transformerless Operation With 4 to 16 Ohm Loads
- Easily Installed 70-Volt Output Transformer
- Volume Compressor Optional
- 18 Watts of Power
- Frequency Response ±1 DB, 20-20,000 CPS
- Plug-In Microphone Preamplifier, Equalized Amplifier (Phono), or Line Transformer
- Compact, Rugged Design
- Minimum Heat Generation
- Extremely Low Noise Figure
- Shelf or Rack Mounted (With Mounting Frame)

MIXER/POWER AMPLIFIER FOR: PAGING, VOICE AND MUSIC SYSTEMS SCHOOLS — THEATERS — HOTELS — CLUBS — FACTORIES OFFICES — CHURCHES

The Altec 361A mixer/power amplifier is a solid-state unit designed to control, mix and amplify two independent input signals, providing 18 watts of power to 4-16 ohm loads. The 361A mixer/power amplifier provides complete versatility to meet the demands of the diverse sound distribution problems which confront the sound engineer. Equally effective with any complement of accessories, the 361A can be tailored to the needs of the small complex installations, providing professional sound at moderate cost.

Without accessories, one input may be used for a ceramic phono pick-up or a high-impedance announce microphone while the other input may be used for any high-impedance high-level device such as a radio tuner or a tape machine. Either input may be used for low-impedance 600-ohm sources.

With accessories — plug-in devices such as the 1578A or 1588A microphone preamplifier, the 1579A equalized phono amplifier, or the 15095 transformer — the mixer/power amplifier will accommodate low-impedance microphones, magnetic pick-ups, balanced or unbalanced low-impedance lines, etc. The 16660 line transformer accessory provides the standard 70-volt speaker distribution system. This transformer is designed to mount on the rear of the amplifier in minutes with solderless inter-connecting links and provides a 70-volt isolated output. The performance of this transformer is such that in excess of 18 watts at less than 2% distortion is available from 40 cycles to above 15,000 cycles. An additional accessory, the 14678A volume compressor assembly can be mounted on the rear panel where a socket has been provided for proper connection to the amplifier circuitry.

The power supply of the 361A mixer/power amplifier is equipped with self-resetting circuit breakers in the primary and the secondary transistor supply circuits to provide maximum component protection in the event of inadvertent speaker line short circuit, inadequate ventilation or other abnormal operating conditions.

The Altec 361A mixer/amplifier measures only 4¾" high, 13⅛" wide and 8¹¹⁄₁₆" deep. The front panel is functionally designed and includes two-color appearance with control knobs having brushed aluminum inserts. Overall illumination of the front panel is provided by indirect means. For rack mounting applications the Altec 14965 rack mount assembly permits the 361A to be rack mounted using only 5¼" of vertical rack space.

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New York

INPUT ACCESSORIES

The plug-in accessories for the input circuits of the mixer/power amplifier are carefully designed units, using solid-state circuitry for rugged dependable operation and high quality performance. These plug-in accessories make the proper input circuit instantly available for rapid installation permitting use of a wide range of input devices. Sockets on the rear of the mixer/power amplifier are pre-wired for the proper operating voltage and circuit connections, allowing the various plug-in accessories to be interchanged without rewiring, circuit or component changes and to be used in any combination to match *properly*, all commonly used input devices. The following descriptions are provided to explain the functions and performance of each of them.

1578A MICROPHONE PREAMPLIFIER

The 1578A microphone preamplifier is designed with a gain of 33.5 db. Sensitivity is 43 millivolts rms for an output of +8 dbm. Frequency response is ±0.5 db, 20-20,000 cps, or, ±1.5 db, 15-50,000 cps. Source impedance is 150 ohms nominal, usable 30 to 20,000 ohms. Equivalent input noise is −122 dbm. The 1578A requires 12 vdc at 13 ma. The 1578A microphone preamplifier may be used with any high quality low-impedance microphone.

1588A MICROPHONE PREAMPLIFIER

The 1588A Transistor Preamplifier has a transformer-isolated input and is designed for use with microphones. The 1588A has a gain of 33.5 db and a frequency response of ±1 db from 30 to 30,000 cycles. Source impedance is 150/250 ohms and the load impedance is 600 ohms. The 1588A is encased in mu-metal providing effective magnetic shielding for the input transformer of 90 db. The equivalent input noise level is −122 dbm. Physically and electrically, the 1588A is interchangeable with the 1578A Preamplifier.

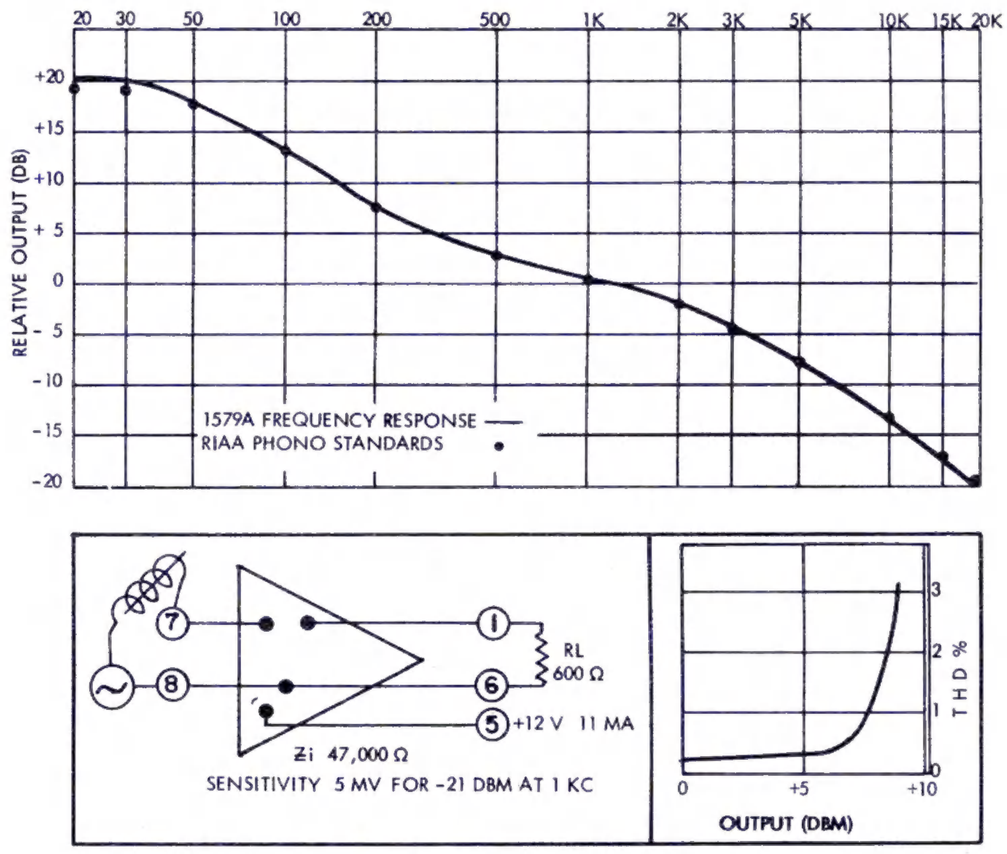
1579A PHONO EQUALIZED PREAMPLIFIER

The 1579A phono equalized preamplifier is specially designed for magnetic phono pick-ups to meet the RIAA standard. Sensitivity is 5 millivolts for 70 millivolt output at 1 kc. Output is +8 dbm at less than 0.5% thd (total harmonic distortion). Input impedance is 47,000 ohms and the power required is 12 vdc at 11 ma. Figure 1 illustrates the performance of the 1579A as referenced to the RIAA standard.

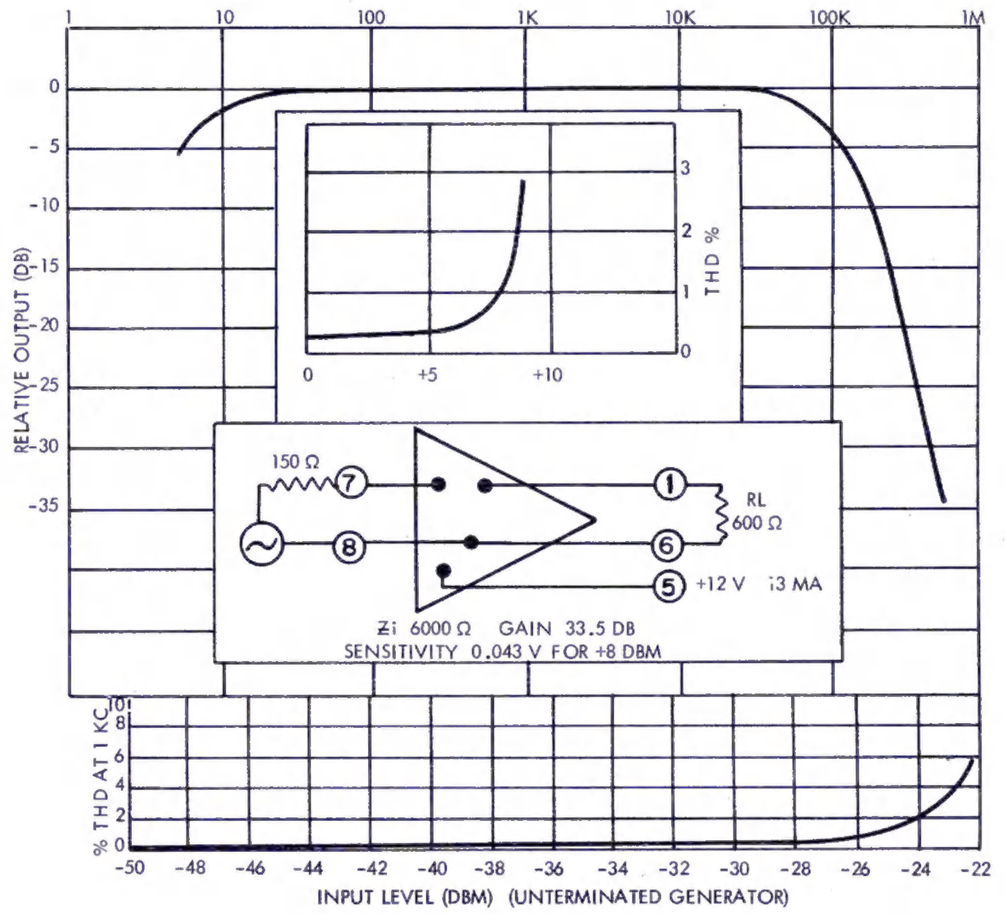
15095 LINE TRANSFORMER

The 15095 line transformer may be used as a bridging transformer for bridging a balanced 600 ohm line. The 15095 has 30 db of electro-magnetic shielding and a frequency response of ±1 db, 30-20,000 cps. The 15095 line transformer may also be used to perform a terminating function rather than a bridging function by the addition of a proper terminating resistor at the input of the mixer/power amplifier.

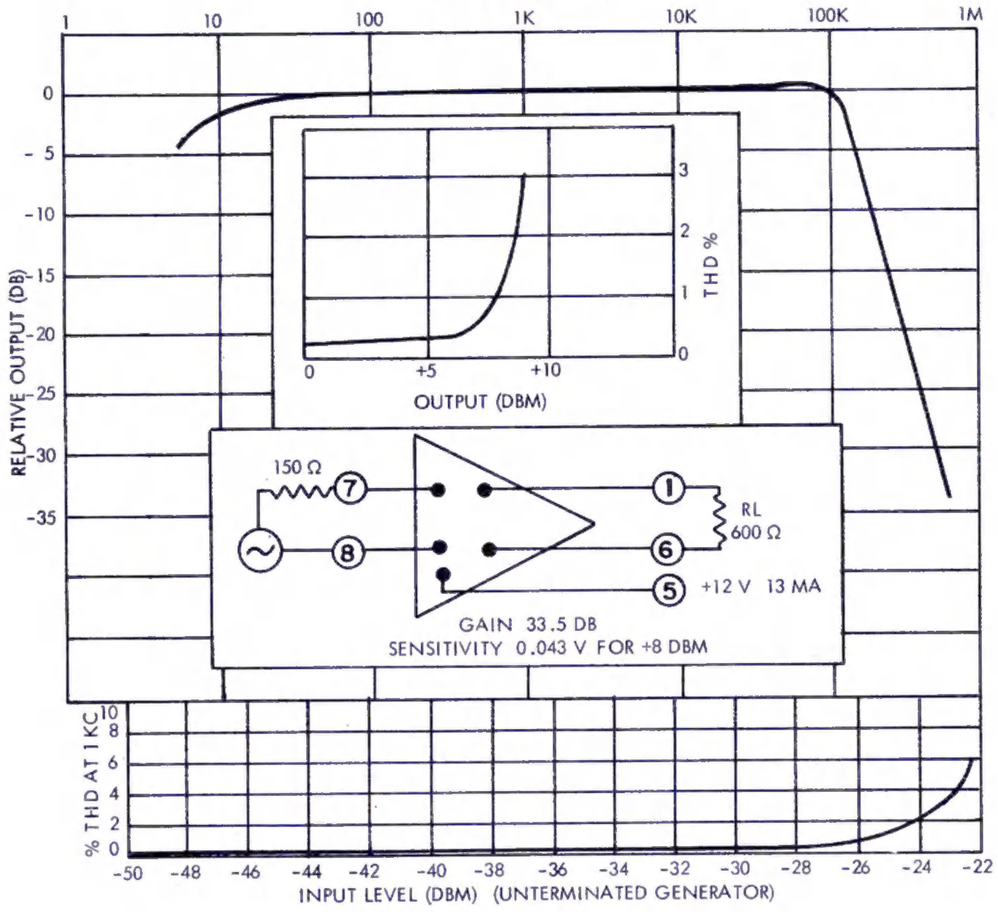
1579A PREAMPLIFIER



1578A PREAMPLIFIER

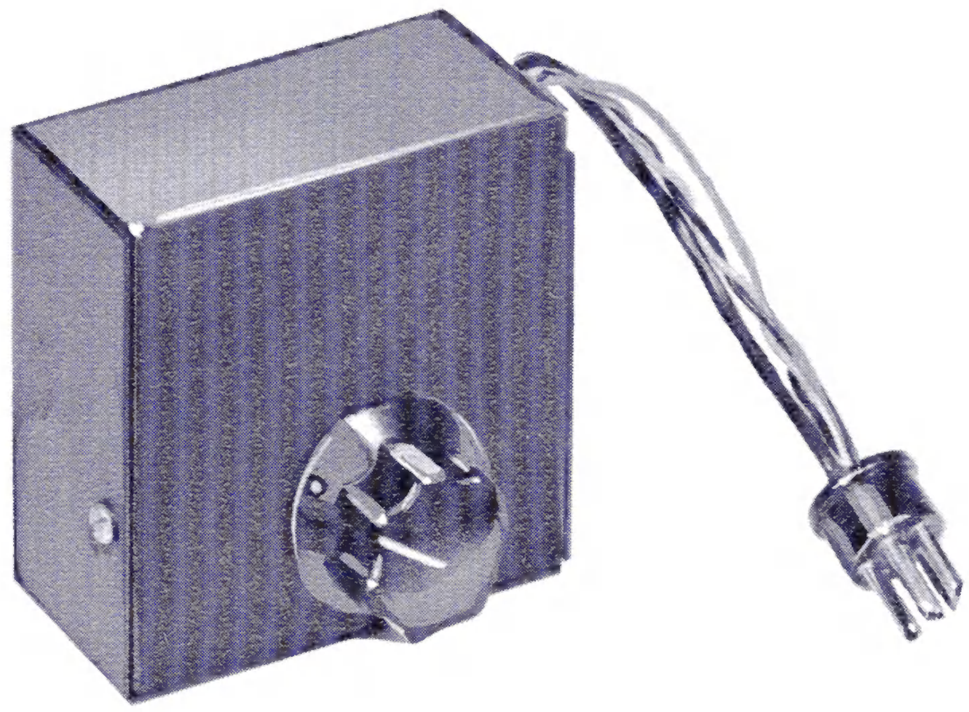


1588A PREAMPLIFIER



ADDITIONAL ACCESSORIES
16660 OUTPUT TRANSFORMER

The output of the 361A mixer/power amplifier is transformerless and, therefore, one side of the output is at ground potential. The Altec 16660 70-volt output transformer has been provided for standard speaker distribution systems where a balanced line is required. The 16660 transformer mounts on the rear of the 361A mixer/amplifier without soldering and no additional hardware other than that supplied with the amplifier is required. The performance of this transformer is such that in excess of 18 watts at less than 2% distortion is available from 40 cycles to above 15,000 cycles.



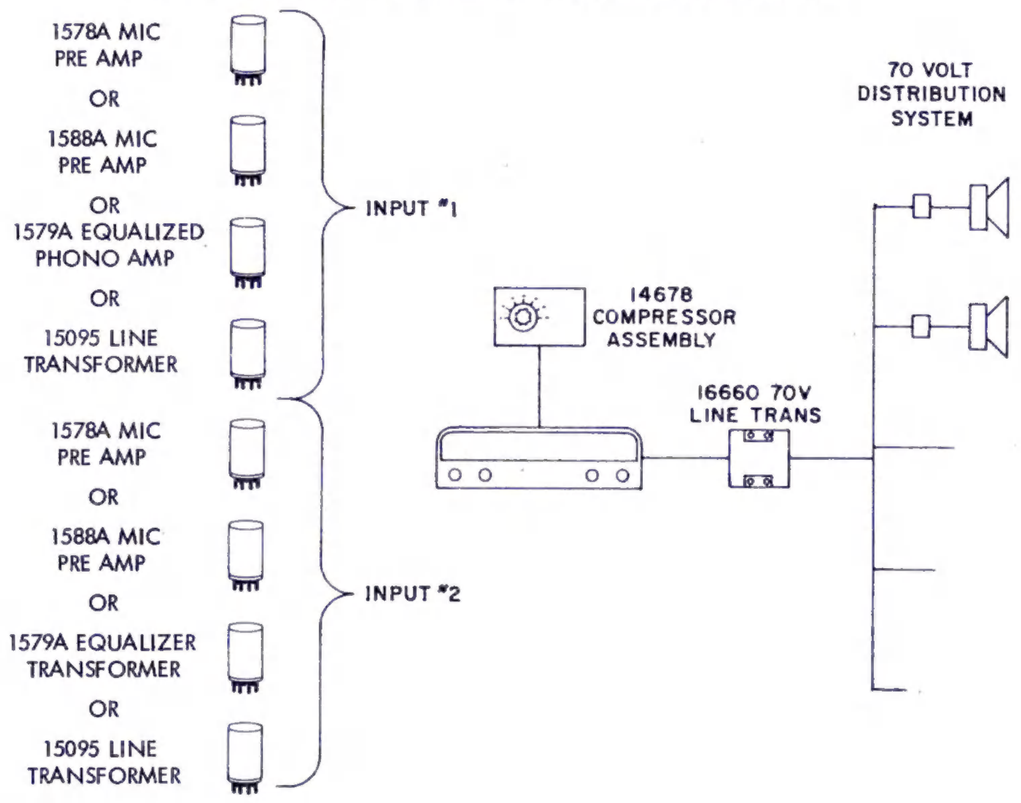
14965 RACK MOUNTING ASSEMBLY

When rack mounting of the 361A mixer/power amplifier is desired, the 14965 rack mounting assembly has been provided as an accessory. The rack mounting assembly includes a front panel for the amplifier which maintains the pleasing appearance and allows the rack to be pressure ventilated if associated equipment requires it. Rack mounted, the 361A will occupy 5¼" of vertical rack space and the front panel is painted Altec Green.

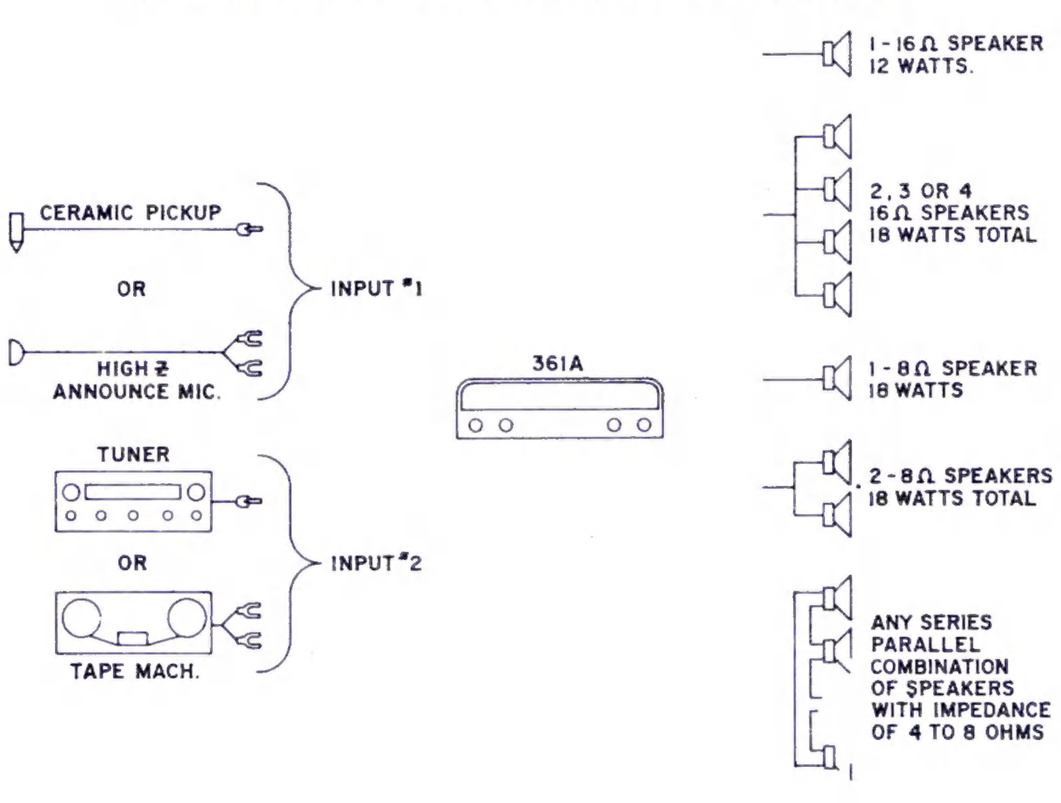
14678A VOLUME COMPRESSOR ASSEMBLY

The volume compressor is rear mounted and is connected to the circuitry of the 361A mixer/power amplifier by means of a six-pin plug attached to the compressor assembly. A knob on the rear of the compressor assembly controls the compression threshold and is adjustable in steps of 2, 4, 8, 16 and off. The numbers correspond to approximate power output in watts. The compressor is rapid acting having an attack time of 10 milliseconds and has a compression ratio above threshold of better than five to one.

361A AMPLIFIER CAPABILITY WITH ACCESSORIES



361A AMPLIFIER CAPABILITY WITHOUT ACCESSORIES



ALTEC 361A

SPECIFICATIONS

Type: Two channel transistor mixer/power amplifier with plug-in options.

Gain: 100 db into high-impedance microphone input.
*117 db with 1578A plug-in microphone preamplifier.
*67 db with 15095 plug-in transformer bridging 600-ohm line.

Input Sensitivity: 700 mv rms 18 watts output, ceramic phono pick-up.
*500 mv rms for 18 watts output, tuner input.
*0.5 mv (1 kc) for 18 watts output, with 1579A equalized plug-in amplifier for magnetic phono pick-up.

Power Output: 25 watts mid-band at less than 2% thd, 4 to 6 ohm loads and 70-volt line,
18 watts at less than 2% thd, 30 to 15,000 cps, 4 to 8 ohm load,
18 watts at less than 2% thd, 40 to 15,000 cps, 70-v line,
12 watts at less than 2% thd, 45 to 12,000 cps, 16 ohm load.

Frequency Response: ±1 db from 10 to 20,000 cps.

Input Impedance: Direct input to mixer pots, 600 ohms nominal (unbalanced),
Tuner input, 30,000 ohms.

Source Impedance: 20,000 ohms high-impedance microphone input (channel 1 only),
Ceramic phono input (channel 1 only),
Up to 50,000 ohms, tuner input (channel 2 only),
150 ohms nominal with 1578A accessory preamplifier (channel 1 or 2),
Up to 50,000 ohms with 1579A accessory magnetic phono amplifier (channel 1 or 2),
600 to 15,000 ohms with 15095 accessory transformer (channel 1 or 2).

Load Impedance: 4/8/16 ohms. 275 ohms, ungrounded, with 16660 (70-v) transformer.

Load Voltages: 8.5/12/14 volts. 70 volts, ungrounded, with 16660 transformer.

Noise Level: (With CER-HI Z Switch in the CER position)
Equivalent input noise — −119 dbm with 1578A preamplifier,
Output noise — −30 dbm with mixer controls closed (8 ohm load).

Controls: 2 mixer, 1 tone, 1 power switch on front panel,
1 selector switch for high-impedance microphone or ceramic phono pickup on rear panel*,
1 balance control, internal.

Power Supply: 117 volts, 50-60 cps (10 watts at zero signal, 28 watts at ⅓ output, and 42 watts at full power).

Dimensions: 4¾" H x 13⅛" W x 8 11/16" D.

Color: Altec Green.

Weight: 10 lbs.

Accessories:
1578A transistor preamplifier, plug-in (microphone).
1579A equalized transistor preamplifier, plug-in (magnetic phono).
1588A transistor preamplifier, plug-in, transformer-isolated input (microphone).
14678 Compressor assembly and 14722 bracket, plug-in connection.
15095 transformer, plug-in (high-level balanced line to mixer).
16660 transformer for 70-volt line (mounts internally from rear with 6 screws for mechanical and electrical connections).

*Indicates the ceramic phono-hi z Microphone switch, which functions as a high-low gain switch when plug-in accessories are used, is in the HI Z MIC position. Approximately 5.5 db of attenuation is available when the switch is in the CER PHONO position.

Ordering Information: Order one 361A amplifier plus the following:
If 70-volt line output is required order one 16660 transformer.
If volume compressor is required, order one 14678A assembly with 14722 mounting bracket.
If accessory inputs are to be used, order any combination of the following: (two maximum may be used at any one time.)
1578A transistor preamplifier plug-in (microphone).
1579A equalized transistor phono preamplifier for magnetic phono pick-up. Plug-in.
1588A transistor preamplifier, plug-in, transformer-isolated input (microphone).
15095 transformer plug-in (high level balanced line to mixer).
If rack mounting of the 361A mixer/power amplifier is desired, order one 14965 rack mounting assembly. (Requires 5¼" of rack space.)

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The mixer/amplifier shall be self-contained and shall employ all solid-state devices. Without accessories, the mixer/amplifier shall be capable of mixing two independent input signals originating from either a ceramic phono pick-up, high-impedance microphone or equivalent, and from either a radio tuner, tape machine or equivalent. Either of the two inputs shall be capable of accepting 600-ohm low-impedance sources. Input connections shall be made in one of two ways; direct connections to terminal strips provided for the separate inputs, or, standard phono plugs for the high-impedance input, magnetic phono input and tuner input. The mixer/amplifier shall have separate volume controls on each input and shall have a treble tone control common to both inputs. In addition, each input shall have a socket provided for the use of various types of plug-in accessories, enabling the mixer/amplifier to accept signals from low-impedance sources, magnetic type pick-ups and bridged low-impedance lines.

The mixer/amplifier shall have a frequency response of ±1 db, 10-30,000 cps, and shall deliver 18 watts at less than 2% thd, (total harmonic distortion), 30-15,000 cps, to a 4/8 ohm load. The output of the mixer/amplifier shall be of the transformerless type, capable of delivering 25 watts into loads ranging from 4 to 6 ohms. The output shall be capable of operating a 70-volt transformer for standard speaker distribution systems, and the 70-volt transformer accessory, specified elsewhere, shall be mounted on the rear of the mixer/amplifier and shall connect to the mixer/amplifier without the need of soldering, utilizing interconnecting links supplied with the transformer.

The mixer/amplifier shall provide operating voltages and a connecting socket for a compressor assembly accessory, specified elsewhere, which may be mounted to the rear of the unit, to provide volume compression when required.

The mixer/amplifier shall have a self-contained power supply, operating from 120 vac, (requiring no more than 42 watts when delivering full power), and shall have self-resetting circuit breakers in both the primary and the transistor supply circuits. Fuse or manual resetting devices are not acceptable.

The mixer/amplifier shall measure no more than 4¾" high, 13⅛" wide, and 8 11/16" deep. It shall weigh no more than 10 pounds and shall be dark green in color.

There shall be available, as a plug-in accessory to the mixer/amplifier, a transistor preamplifier with a nominal 150-ohm source impedance, usable 30-20,000 ohms. Frequency response shall be ±0.5 db, 20-20,000 cps, or ±1.5 db, 15-50,000 cps. The transistor plug-in preamplifier shall have a gain of 33.5 db and sensitivity shall be 43 millivolts for an output of +8 dbm. The plug-in transistor preamplifier shall allow any high-quality low-impedance microphone to be used with the mixer/amplifier.

There shall be available, as a plug-in accessory to the mixer/amplifier, a phono equalized transistor amplifier which shall meet the RIAA standard. Sensitivity shall be 5 millivolts for 70-millivolt output at 1 kc. Output shall be +8 dbm at less than 0.5% thd (total harmonic distortion). Input impedance shall be 47,000 ohms and power required shall be 12 vdc at 11 ma.

There shall be available, as a plug-in accessory to the mixer/amplifier, a transistor preamplifier with a transformer-isolated input and with a nominal 150-ohm source impedance, usable 30-20,000 ohms. Frequency response shall be ±1 db, 30-30,000 cps. The transistor plug-in preamplifier shall have a gain of 33.5 db and sensitivity shall be 43 millivolts for an output of +8 dbm. The plug-in transistor preamplifier shall allow any high quality low impedance microphone to be used with the mixer/amplifier.

Any mixer/amplifier and plug-in accessories not meeting the above specifications shall be deemed unacceptable under this specification.

The mixer/amplifier shall be Altec Lansing model 361A.

The transistor preamplifier shall be Altec Lansing model 1578A.

The phono preamplifier shall be Altec Lansing model 1579A.

The transistor preamplifier with transformer-isolated input shall be Altec Lansing model 1588A.

NOTICE

We recommend that you obtain your Altec products from factory trained authorized Altec Sound Contractors and Distributors. This will assure you of proper installation, a continuing source of knowledgeable advice, service, and quick warranty protection.

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